AMENDMENTS TO THE CLAIMS

Please cancel claims 2, 15, 16 and 24, amend claims 1, 3, 5, 6, 8-10, 13, 18, 23, 25 and 26, and add new claim 40.

1. (Currently Amended) A system for processing microfeature workpieces, comprising:

a vessel configured to receive a processing fluid, the vessel having a process location positioned at a process plane to receive a microfeature workpiece;

a workpiece support positioned ~~at least proximate to the vessel, the workpiece support being positioned~~ to carry a microfeature workpiece face-down in a generally horizontal orientation at the process location of the vessel during processing, the workpiece support being movable relative to the vessel between a load/unload position and a process position;

a paddle device positioned below the workpiece support and having at least one paddle, ~~positioned at least proximate to the process location,~~ wherein at least one of the workpiece support and the at least one paddle is movable relative to the other along a linear motion path while the workpiece support carries a microfeature workpiece; and

an electrode support ~~positioned to~~ carrying a thieving electrode ~~remote from~~ in fluid communication with the process plane, the thieving electrode being positioned along a flow path that includes a virtual thief location spaced apart from the process plane.

2. (Cancelled)

3. (Currently Amended) The system of claim 1, further comprising:
~~the thieving electrode;~~

a contact electrode carried by the workpiece support and positioned to make electrical contact with a microfeature workpiece when the workpiece support carries the microfeature workpiece;

at least one anode spaced apart from the process location; and

one or more power supplies coupled among the contact electrode, the thieving electrode and the at least one anode to provide current to the at least one anode at a potential greater than potentials provided to the thieving electrode and the contact electrode.

4. (Original) The system of claim 1 wherein the electrode support includes a plurality of electrode chambers at least partially separated from each other by dielectric barriers, gaps between the dielectric barriers forming a corresponding plurality of virtual electrode locations spaced apart from the process location.

5. (Currently Amended) The system of claim 1, ~~wherein the at least one paddle includes a plurality of paddles, with the paddles being movable back and forth relative to the process location along a generally linear motion path, and wherein the system~~ further comprisinges an at least partially enclosed paddle chamber positioned between the electrode support and the process location, the paddle chamber housing the ~~plurality of~~ at least one paddles.

6. (Currently Amended) AThe system of claim 1 wherein the processing fluid is a first processing fluid, and wherein the system further ~~for processing microfeature workpieces,~~ comprisesing:

~~a vessel configured to receive a first processing fluid, the vessel having a process location positioned at a process plane to receive a microfeature workpiece;~~

~~a workpiece support positioned at least proximate to the vessel, the workpiece support being positioned to carry a microfeature workpiece at the process location of the vessel during processing;~~

~~a paddle device having at least one paddle positioned at least proximate to the process location, wherein at least one of the workpiece support and the at least one paddle is movable relative to the other while the workpiece support carries a microfeature workpiece; and~~

a nozzle coupleable to a source of a second processing fluid and positioned above the process location to direct a stream of the second processing fluid toward a microfeature workpiece carried by the workpiece support.

7. (Original) The system of claim 6 wherein the workpiece support is movable between a first position to carry a microfeature workpiece in contact with the first processing fluid at the process location, and a second position above the first position to place the microfeature workpiece in a path of the stream of second processing fluid directed by the nozzle.

8. (Currently Amended) The system of claim 6~~, further comprising an electrode support positioned to be in fluid communication with the process location,~~ wherein the electrode support ~~having~~ has a plurality of electrode chambers at least partially separated from each other by barriers, gaps between the barriers forming a corresponding plurality of virtual electrode locations spaced apart from the process location.

9. (Currently Amended) The system of claim 6, ~~wherein the at least one paddle includes a plurality of paddles, with the paddles being movable back and forth relative to the process location along a generally linear motion path, and wherein the system~~ further comprising~~es~~ an at least partially enclosed paddle chamber positioned between the electrode support and the process location, the paddle chamber housing the ~~plurality of~~ at least one paddle~~s~~.

10. (Currently Amended) A system for processing microfeature workpieces, comprising:

a vessel configured to receive a processing fluid, the vessel having a process location positioned at a process plane to receive a microfeature workpiece;

a workpiece support positioned ~~at least proximate to the vessel, the workpiece support being positioned~~ to carry a microfeature workpiece face-down in a generally horizontal orientation at the process location of the vessel during processing, the workpiece support being movable relative to the vessel between a load/unload position and a process position;

a paddle device positioned below the workpiece support and having at least one paddle ~~positioned at least proximate to the process location~~, wherein at least one of the at least one paddle and the workpiece support is movable relative to the other along a linear motion path while the workpiece support carries a microfeature workpiece; and

an electrode support positioned to be in fluid communication with the process location, the electrode support having a plurality of electrode chambers at least partially separated from each other by barriers, gaps between the barriers forming a corresponding plurality of virtual electrode locations spaced apart from the process plane.

11. (Original) The system of claim 10, further comprising a plurality of electrodes disposed in the corresponding plurality of electrode chambers.

12. (Original) The system of claim 10, further comprising an electrode thief spaced apart from the process plane, the electrode thief being positioned in fluid communication with the process location to receive ions from the processing fluid that would otherwise attach to the microfeature workpiece.

13. (Currently Amended) ~~A~~ The system ~~for processing microfeature workpieces,~~ of claim 1, further comprising:

~~a vessel configured to receive a processing fluid, the vessel having a process location positioned at a process plane to receive a microfeature workpiece;~~

~~a workpiece support positioned at least proximate to the vessel, the workpiece support being positioned to carry a microfeature workpiece at the process location of the vessel during processing;~~

a magnet positioned ~~at least proximate to the process location, the magnet being positioned~~ to impose a magnetic field at the process location to orient material deposited on a microfeature workpiece; and wherein

~~an~~ the electrode support ~~positioned to carry at least one electrode in fluid communication with the process location, the electrode support being~~ is movable relative to the vessel between a process position and a removed position along a motion path that does not pass through the process plane.

14. (Original) The system of claim 13 wherein the magnet includes a permanent magnet.

15. (Cancelled)

16. (Cancelled)

17. (Original) The system of claim 13, further comprising a paddle device having at least one paddle positioned at least proximate to the process location, wherein at least one of the at least one paddle and the workpiece support is movable relative to the other while the workpiece support carries a microfeature workpiece during processing.

18. (Currently Amended) A system for processing microfeature workpieces, comprising:

a vessel configured to receive a processing fluid, the vessel having a process location positioned to receive a microfeature workpiece, the process location having a center;

an electrode support positioned to carry at least one electrode in fluid communication with the process location;

a workpiece support positioned ~~at least proximate to the vessel, the workpiece support being positioned~~ to carry a microfeature workpiece at the process location of the vessel; ~~and~~

a paddle device having at least one paddle elongated along a paddle axis and movable relative to the process location along a motion axis transverse to the paddle axis; and

an electric field control element positioned along a flow path between the electrode support and the process location, the electric field control element being configured to control an electrical current density in the processing fluid at the process location to have a first value at a first circumferential site of the process location generally aligned with the motion axis, and a second value ~~different~~ less than the first value at a second circumferential site of the process location generally aligned with the paddle axis, the first and second circumferential sites being approximately the same distance from the center of the process location.

19. (Original) The system of claim 18 wherein the electric field control element includes a slot having a first region with a first width and a second region with a second width greater than the first width.

20. (Original) The system of claim 18 wherein the electric field control element includes a plurality of apertures, with apertures in a first region of the electric field control

element providing a first open area and apertures in a second region of the electric field control element providing a second open area greater than the first open area.

21. (Original) The system of claim 18 wherein the vessel includes vanes aligned along axes extending between the electric field control element and the process location.

22. (Original) The system of claim 18 wherein the vessel includes a first portion and a second portion sealably coupled to the first portion, and wherein the electric field control element includes a gasket sealably positioned between the first and second portions.

23. (Currently Amended) The system of claim 18, further comprising:

a paddle chamber in fluid communication with the vessel, the paddle chamber having an opening at the process location to receive a microfeature workpiece, and wherein the electric field control element forms a portion of the paddle chamber facing toward the opening; and wherein the

a paddle device is disposed in the paddle chamber, the paddle device having at least one paddle positioned at least proximate to the process location, wherein at least one of the workpiece support and the at least one paddle is movable relative to the other to agitate processing fluid at the process location while the workpiece support carries a microfeature workpiece.

24. (Cancelled)

25. (Currently Amended) The system of claim 18, further comprising:

a paddle chamber in fluid communication with the vessel, the paddle chamber having an opening at the process location to receive a microfeature workpiece; and

~~a paddle device disposed in the paddle chamber, the paddle device having at least one paddle positioned at least proximate to the process location, and wherein the at least one paddle is elongated along a paddle axis and movable relative to the process location along a motion axis transverse to the paddle axis, further~~ wherein the electric field control element has a first flow-through area in regions aligned with the paddle axis and a second flow-through area ~~less~~ greater than the first in regions aligned with the motion axis.

26. (Currently Amended) A system for processing microfeature workpieces, comprising:

a vessel configured to receive a processing fluid, the vessel having a process location positioned to receive a microfeature workpiece;

a workpiece support ~~positioned at least proximate to the vessel, the workpiece support being~~ positioned to carry a microfeature workpiece face-down in a generally horizontal orientation at the process location of the vessel, and to rotate the microfeature workpiece relative to the vessel, the workpiece support being movable relative to the vessel between a load/unload position and a process position; and

a paddle device positioned below the workpiece support and having at least one paddle ~~positioned at least proximate to the process location~~, wherein at least one of the at least one paddle and the workpiece support is movable relative to the other along a generally linear motion axis while the workpiece support carries a microfeature workpiece.

27. (Original) The system of claim 26 wherein the process location is positioned at a process plane and wherein the at least one paddle includes a plurality of paddles having spaced apart paddle surfaces.

28. (Original) The system of claim 26, further comprising a magnet positioned at least proximate to the process location to orient magnetically sensitive material as it is

deposited on the microfeature workpiece, and wherein the workpiece support is rotatable to orient the microfeature workpiece relative to the magnet for receiving the magnetically sensitive material.

29-39. (Cancelled)

40. (New) A system for processing microfeature workpieces, comprising:

a vessel configured to receive a processing fluid, the vessel having a process location positioned to receive a microfeature workpiece, the process location having a center;

an electrode support positioned to carry at least one electrode in fluid communication with the process location;

a workpiece support positioned to carry a microfeature workpiece at the process location of the vessel; and

an electric field control element positioned along a flow path between the electrode support and the process location, the electric field control element being configured to control an electrical current density in the processing fluid at the process location to have a first value at a first circumferential site of the process location and a second value different than the first value at a second circumferential site of the process location, the first and second circumferential sites being approximately the same distance from the center of the process location, wherein the vessel includes vanes aligned along axes extending between the electric field control element and the process location.